## METHODS, SYSTEMS, AND SOFTWARE FOR IDENTIFYING FUNCTIONAL BIO-MOLECULES

## ABSTRACT OF THE DISCLOSURE

The present invention generally relates to methods of rapidly and

fficiently searching biologically-related data space. More specifically, the invention includes methods of identifying bio-molecules with desired properties, or which are most suitable for acquiring such properties, from complex bio-molecule libraries or sets of such libraries. The invention also provides methods of modeling sequence-activity relationships. As many of the methods are computer-implemented, the invention additionally provides digital systems and software for performing these methods.